

05/2/02



## PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PCT  
#317  
Enq, sh  
10-2-03  
JW

In re Application of : Max BACHMANN  
 Serial no. : 10/088,313  
 Filed : with an effective filing date of September 16, 2000  
 For : FINAL DRIVE FOR DRIVING A VEHICLE  
 WHEEL  
 Group Art Unit :  
 Examiner :  
 Docket : ZAHFRI P420US

The Commissioner of Patents and Trademarks  
 Washington, D.C. 20231

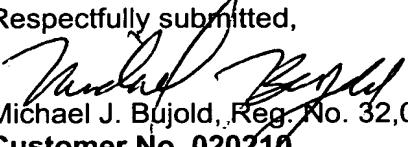
**SUBMISSION OF ENGLISH TRANSLATION OF  
 INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

Dear Sir:

Enclosed please find an English translation of the International Preliminary Examination Report concerning the above-identified application. Please enter the same into the record of this case.

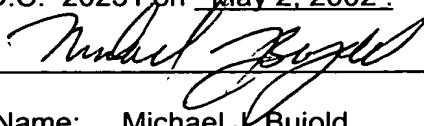
In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,

  
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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service, with sufficient postage, as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231 on May 2, 2002.

By:   
 Print Name: Michael J. Bujold

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 JUL 03 2002  
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## PATENT COOPERATION TREATY

**PCT**

**NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

TS Eingang

24 April 2002

ZF FRIEDRICHSHAFEN AG  
88038 Friedrichshafen  
ALLEMAGNE

Date of mailing (day/month/year) 11 April 2002 (11.04.02)	
Applicant's or agent's file reference 7612 WO F RO-RU	<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/EP00/09067	International filing date (day/month/year) 16 September 2000 (16.09.00)
Applicant ZF FRIEDRICHSHAFEN AG et al	

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

JP,US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

EP

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

**It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.**

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. (41-22) 740.14.35	Authorized officer  Pascal Piriou  Telephone No. (41-22) 338.83.38
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Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 7612 WO F RO-RU	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP00/09067	International filing date (day/month/year) 16 September 2000 (16.09.00)	Priority date (day/month/year) 22 September 1999 (22.09.99)
International Patent Classification (IPC) or national classification and IPC B60K 7/00		
Applicant	ZF FRIEDRICHSHAFEN AG	

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.
<input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of <u>3</u> sheets.
3. This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 07 March 2001 (07.03.01)	Date of completion of this report 14 December 2001 (14.12.2001)
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP00/09067

## I. Basis of the report

1. With regard to the elements of the international application:<sup>a</sup> the international application as originally filed the description:

pages \_\_\_\_\_

1-9

, as originally filed

pages \_\_\_\_\_

, filed with the demand

pages \_\_\_\_\_

, filed with the letter of \_\_\_\_\_

 the claims:

pages \_\_\_\_\_

, as originally filed

pages \_\_\_\_\_

, as amended (together with any statement under Article 19

pages \_\_\_\_\_

, filed with the demand

pages \_\_\_\_\_

1-14

, filed with the letter of \_\_\_\_\_

28 November 2001 (28.11.2001)

 the drawings:

pages \_\_\_\_\_

1/2,2/2

, as originally filed

pages \_\_\_\_\_

, filed with the demand

pages \_\_\_\_\_

, filed with the letter of \_\_\_\_\_

 the sequence listing part of the description:

pages \_\_\_\_\_

, as originally filed

pages \_\_\_\_\_

, filed with the demand

pages \_\_\_\_\_

, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4.  The amendments have resulted in the cancellation of: the description, pages \_\_\_\_\_ the claims, Nos. \_\_\_\_\_ the drawings, sheets/fig \_\_\_\_\_

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5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-14	YES
	Claims		NO
Inventive step (IS)	Claims	1-14	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO

## 2. Citations and explanations

## 1. Relevant prior art:

D1: DE-A-197 09 579 (ZF) 17 September 1998, cited in  
 the application  
 D2: DE-A-39 24 817 (STEHLE JOSEF & SOEHNE)  
 31 January 1991  
 D3: US-A-5 894 907 (PETER TIM) 20 April 1999  
 D4: EP-A-0 919 416 (PROMEC S R L) 2 June 1999.

2. Claim 1 relates to a wheel drive for driving a motor vehicle wheel, having a motor (1) arranged in relation to the wheel axle, said motor driving a wheel via gear reduction stages (3, 11), it being possible to brake said wheel via a brake disc (15) arranged within a wheel rim (12) and a corresponding actuation device, **characterised in that** the gear reduction stages (3, 11) are arranged one immediately after the other, the brake disc (15) is disposed between the motor (1) and the gear reduction stages (3, 11) and the axial extension of the motor (1) is limited by the brake disc (15) and the actuation device (23) of the brake.

3. Document D1, which is relevant and of the type in

question, shows all the features contained in the preamble to Claim 1, that is a motor arranged **non-coaxially** to the wheel axle, which is known to require a larger space in the drive-side area.

4. The problem of interest consists in making the axial extension of the arrangement known from D1 more compact, this being achieved by the measures specified in the characterising part of Claim 1.
  - 4.1 Document D2, which is also relevant, describes a wheel drive for driving a motor vehicle wheel, having a motor arranged coaxially in relation to the wheel axle, said motor driving a wheel via gear reduction stages, it being possible to brake said wheel via a brake arranged within a wheel rim, **in which** the gear reduction stages are arranged one immediately after the other and **in which** the brake is disposed between the motor and the gear reduction stages.
  - 4.2 The remaining feature of Claim 1, according to which a maximum size is predetermined for the motor in relation to the brake disc and the actuation device, cannot be taken from the available prior art.
5. Assessed against the available prior art, the requisite inventive step can also be acknowledged for the restricted subject matter of Claim 1.
6. The developments of the dependent claims also meet the requirements of the PCT.
7. There are no doubts as to industrial applicability, which is clearly established in the field of

automotive engineering.

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

1. The introductory part of the description is inconsistent with the now valid set of claims. In addition, the introductory part of the description neither cites nor acknowledges the additional relevant prior art as per D2. In this regard the applicant has expressed a wish to make the necessary adjustment in the regional or national phase.
2. The preamble to Claim 1 should formally read as follows: *wheel drive for driving a motor vehicle wheel, having a motor (1)...., said motor driving a wheel..., it being possible to brake said wheel via a brake disc (15) of a brake arranged within a wheel rim (12) and a corresponding actuation device....*
3. The features of some of the dependent claims are not correctly preceded by the definite or indefinite article as follows:  
Claim 7: **the** wheel hub, should read **a** wheel hub;  
Claim 10: **a** motor, should read **the** motor;  
Claim 13: **the** ring gear, should read **a** ring gear;  
Claim 14: **a** wheel bearing, should read **the** wheel bearing.